



The Lachlan Fold Belt is shaping up to be elephant country and its only just beginning

Mining

When junior explorers start turning up discoveries on ground that had previously been considered “mature” despite hosting one of Australia’s largest and lowest cost gold mines, it is hard not to be intrigued.

And that is exactly the case with the Lachlan Fold Belt in New South Wales.

Despite hosting the giant Cadia copper-gold mine, the bulk of exploration work carried out between 20 to 25 years ago failed to turn up any further large successes, which led to a dearth of exploration until recent years.

“I used to hear quite a lot from fund managers and brokers that the central west is a mature area, exploration has been well covered, and probably there wouldn’t be much more to be found,” **Alkane Resources (ASX:ALK – \$732M market cap*)** technical director Ian Chalmers told *Stockhead*.

“And that is really a long way from the truth, because the reality is when you stand up and look at it as an exploration region, you realise just how little has been done in terms of understanding the geology and understanding the potential of the mineralisation.”

READ: The hunt is on for the next big porphyry hit in the Lachlan Fold Belt — and these small caps are leading the charge

Hedley Widdup — executive director at investment firm Lion Selection Group — agreed, noting that the Lachlan probably trailed some other significant, economic geology jurisdictions in Australia in terms of understanding.

“Geologists suffer from blinkers syndrome just as much as everyone else when it comes to prevailing theories,” he said.

Widdup highlighted Western Australia’s Yilgarn Craton as an example, noting that while it was originally considered to be prospective only for gold, the discovery of Kambalda led to the development of a nickel industry in the state.

Alkane Resources TSX-V: AIS

AIS with an \$8M CDN market cap, has acquired three properties in the Lachlan Fold Belt Elephant Territory since this article was published...

The Yalgogorin Gold Project, Lachlan Fold Belt – The drill-ready 56 sq km Exploration Licence EL6030 and 2.8 sq km EL5891 properties in the NSW gold corridor. Includes seven historical mines, 31 drill holes, extensive auger and many shallow gold intercepts with up to 32.2 g/t Au.

The Fosterville-Toolleen Gold Project – 26 sq km EL6001, past production of 7,000 tonnes @10 g/t Au from the top 60 metres and an 88 gm nugget on surface. Closest (12 km) drill-ready property to Kirkland Lake Gold’s (NYSE: KL) Fosterville Mine – lowest-cost producer worldwide at \$315/oz and 34.3 g/t with a reserve of 9 Moz gold**.

The Kingston Gold Project – 167 sq km EL6318 is located 35 km north-west from Stawell, Victoria. The drill-ready property is flanked by Navarre Minerals (ASX: NML) and was previously explored by BHP and WMC. Recent drill results include 3.6m @ 16.89 g/t Au, including 2.5m @ 24.27 g/t Au.

“But there are VMS, there are copper deposits, there is zinc, those things are possible, they just don’t float to the top of mainstream thinking.”

Making the Discovery

So just how did Alkane make its play-opening Boda copper-gold porphyry discovery in September last year?

Chalmers pointed to what he described as “interesting and thorough” academic studies done by the Geological Survey of New South Wales and the University of Tasmania as playing a key role.

“They have done some fantastic work over the last 10 years on categorising the rocks, categorising the geochemistry of those rocks and really enabling exploration companies like us to zero in on the more favourable areas,” he explained.

“Otherwise you can spend a lot of time and effort looking at rocks that are never going to host mineralisation.”

READ: Explainer: Why are so many explorers chasing a porphyry payday?

This academic work helped the company to refine its targeting models, understand the geology and alteration before drilling test holes in

2015-16 that eventually led to the drilling of the Boda discovery with a 502m intercept grading 0.48 grams per tonne (g/t) gold and 0.2 per cent copper from a depth of 211m.

And there might be more discoveries to find in the Lachlan, though Alkane believes that the right work would be needed in order to achieve them.

Chalmers says that while Boda has indications of the mineralisation and alteration on the surface, the system does not fully develop until “you are several hundred metres into the crust”.

“Sometimes surface expressions can be misleading ... you have to understand the chemistry of the rocks, chemistry of the alteration, it becomes quite an in-depth data analysis, become target specific, otherwise you spend a lot of time drilling holes into dud areas,” he added.

“I think our discovery of Boda woke up the market to the fact that there are other large deposits to be found in the region.”

And it is not just porphyry copper-gold systems either.

Sky Metals’ (ASX: SKY – \$57M market cap*) recent discovery of gold at the Cullarin project has unlocked the potential for more McPhillamys-style gold mineralisation in the Lachlan.

McPhillamys, located about 35km east of Orange, was originally discovered by Alkane and Newmont in 2006 before it was sold to **Regis Resources (ASX:RRL – \$2.1 Billion market cap*)** in 2012. Regis is currently progressing the project towards production.

In February, Sky unveiled some rather sizeable gold hits of 93m at 4.24g/t gold from a depth of 56m that includes a high-grade zone of 14m at 20.2g/t gold from 92m and 54m at 0.84g/t gold from 116m, including 5m at 5.76g/t gold from 128m.

Peloton Capital executive director Nicholas Downes told *Stockhead* that Sky had come through with some spectacular numbers with the second hole in a very large McPhillamys analogue.

“That has the potential to be on the cusp of a world-class discovery.”

Earlier this month, Sky elected to spend a further \$1.6m within three years to increase its interest in the Cullarin and Kangiara gold project to 80 per cent.

It has also kicked off diamond drilling to follow up on its initial results.

Meanwhile, **Krakatoa Resources (ASX: KTA – \$21M market cap*)** is progressing exploration of two intrusive complexes at its Belgravia project.

Copper Hill has a contained resource of 1.47 million ounces of gold and 535,000 tonnes of copper with a top drilling intercept of 60m at 5.4g/t gold and 1.83 per cent copper.

“We noticed the presence of shoshonitic rocks and they are widely regarded as being associated with many epithermal and porphyry style gold deposits worldwide and this drilling has exposed two complexes which contain those rocks,” Krakatoa managing director Colin Locke said.

He told *Stockhead* the two intrusive complexes defined by aircore drilling coincided with two donut-shaped anomalies that were picked up in an aeromagnetic program and field work being done on the ground.

Recent float samples from the Sugarloaf target have returned up to 5.19g/t gold and 1.73 per cent copper.



Sample assaying 5.19g/t gold and 1.73 per cent copper from Krakatoa’s Sugarloaf target Pic: Krakatoa Resources

Alkane’s Chalmers believes that any discovery in the Lachlan Fold Belt serves to increase its prospectivity.

“Every place where you get large amounts of mineralisation accumulating, whether it be Copper Hill or Boda, it just demonstrates that you’ve got potential,” he said.

Waking Up to the Lachlan

Chalmers believes that Alkane’s discovery of Boda has woken the market up to the fact that there are other large deposits to be found in the region.

This was supported by Peloton Capital’s Downes who said the recent discoveries were cause for reflection for people in the investment community.

“It is true elephant country ... there has become the realisation that it is a tier 1 porphyry belt and it lies right here in New South Wales,” he added.

“It has been in conjunction with a strong gold price and therefore, there has been renewed interest from the investment community to take a position in the area.”

Lion Selection Group’s Widdup also pointed to the small number of players in the Lachlan compared to other jurisdictions.

“If you generate \$15m worth of buying interest (in the Lachlan) it is spread across four or five stories as opposed to someone finding gold in Western Australia (where) the money spreads a lot more thinly.”

Other ASX small caps hunting elephants

Wellington covers more than 200sqkm within the Molong volcanic belt, with most of the package containing the same rocks that host both the Boda discovery and **Newcrest Mining’s (ASX: NCM – \$2.1Billion market cap*)** operating Cadia mine.

Director Tom Pickett **told Stockhead in March** that porphyry style deposits had the tendency to occur in clusters while historical geochemical sampling had already confirmed the presence of gold in the system.

In early April, **Impact Minerals (ASX: IPT – \$34M market cap*)** received assays from rock chip samples on four key targets at its Commonwealth project, which is along trend from and close to Boda.

In addition to the Boda South, Apsley, Spicers Creek and Greenobbys targets, Impact has also identified the Gladstone target that is along trend to the south of **Magmatic Resources’ (ASX: MAG – \$35M market cap*)** Lady Ilse target.

All five targets have characteristics suggesting that they are parts of a large porphyry or other large intrusive-related copper-gold system.

Kaiser Reef (ASX: KAU – \$14M market cap*) recently started a high resolution aeromagnetic and radiometric survey over its Stuart Town gold project that is along strike and in between Cadia and Boda.

This is intended as the first step in properly exploring the project areas.

One of the models based on prior geophysical data and interpretations to explain the number of historic gold mines is that they were originally sourced and migrated

from underlying felsic intrusive and porphyry style mineralised bodies.

The magnetic survey is considered to be the best tool to identify the underlying structures while the radiometric survey will assist in mapping outcropping rock types and alteration.

Meanwhile, rare earths-focused **RareX (ASX: REE – \$44M market cap*)** is being free-carried by Canada’s Kincora Copper for exploration at the Trundle project near the world-class Northparkes project.

Kincora plans to carry out drilling at Trundle for copper-gold deposits like those at Northparkes, Cadia and Boda.

RareX had agreed to farm out up to 65 per cent in the project to Kincora in January for an upfront payment of about \$200,000 and shares representing a 9.9 per cent stake in Kincora.

Sultan Resources’ (ASX: SLZ – \$14M market cap*) is carrying out rock and soil sampling programs at the Big Hill and Ringaroo targets within its Colossus tenement package that it is currently in the process of acquiring.

Its move to acquire Colossus for 10 million shares and \$100,000 in cash was a bid to sew up the only remaining privately-held tenure in the region.

A key focus for Sultan will be Big Hill, a large 5km by 2.5km ‘magnetic high’ inferred to be an ‘intrusive’ – an early indication of a potential porphyry system.

At Stockhead, we tell it like it is. While Impact Minerals is a Stockhead advertiser, it did not sponsor this article.

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[Check out the AIS Resources website.](#)

For details about the three AIS advanced drill-ready gold projects. All three projects are located in the prolific Lachlan Fold Belt Elephant Territory Lachlan Fold Belt – with two also located in the Victorian Golden Triangle.

** Market caps are in CDN\$ and based on November 1, 2020 share prices.*

*** Fosterville Mines’ total gold endowment (including historical production) is 9 Moz. – Published by the Department of Jobs Precincts and Resources, Australia.*